TM 1443 – ALOA LISTERIA AGAR BASE (L. MONO DIFFERENTIAL AGAR BASE)

INTENDED USE

For selective and differential isolation of *Listeria monocytogenes*.

PRODUCT SUMMARY AND EXPLANATION

Listeria monocytogenes is a gram-positive foodborne human pathogen responsible for serious infections in pregnant women that may ultimately result in abortion, stillbirth, birth of a child with neonatal listeriosis and meningitis or primary bacteremia in adults and juveniles. The pathogenicity of *Listeria ivanovii* for humans is uncertain. Since *L. monocytogenes* and *L. innocua* have similar biochemical properties, they cannot be differentiated on traditional media. L. mono Differential Agar Base is based on the formulation of Ottoviani and Agosti for the selective and differential isolation of *Listeria monocytogenes* from food and animal feeds which is adopted by ISO Committee.

Listeria species hydrolyse the chromogenic substrate which produces green coloured colonies. Differentiation of *Listeria monocytogenes* from other Listeria species is based on phosphatidylinositol specific phospholipase C (PIPLC) activity. Phospholipase C enzyme hydrolyses the purified substrate added to the medium resulting in an opaque halo around *Listeria monocytogenes* colonies.

COMPOSITION

Ingredients	Gms / Ltr
Meat peptone	18.000
Casein enzymic hydrolysate	6.000
Yeast extract	10.000
Sodium pyruvate	2.000
Glucose	2.000
Magnesium glycerophosphate	1.000
Magnesium sulphate	0.500
Sodium chloride	5.000
Lithium chloride	10.000
Disodium hydrogen phosphate anhydrous	2.500
Chromogenic substrate	0.050
Agar	15.000

PRINCIPLE

Meat peptone, casein enzymatic hydrolysate, yeast extract and sodium pyruvate provide essential growth nutrients and nitrogenous substances. Glucose is the fermentable carbohydrate. Sodium chloride maintains osmotic equilibrium. Phosphate buffers the medium. Lithium chloride and added selective supplements inhibit accompanying microflora and allow the growth of *Listeria* species.

INSTRUCTION FOR USE

- Dissolve 36.02 grams in 460 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to 45-50°C.

- Aseptically add sterile contents of 1 vial of L. mono Enrichment Supplement I (TS 321) and sterile rehydrated contents of L.mono Selective Supplement I (TS 227), L.mono Selective Supplement II (TS 228).
- Mix well and pour into sterile Petri plates.

Warning: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured, opalescent gel forms in Petri plates
pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after incubation with added sterile L. mono Selective supplement I, L. mono Selective Supplement I and L.mono Enrichment supplement II.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	PIPLC Activity	Incubation Temperature	Incubation Period
Candida albicans	10231	>=10^3	Inhibited	0%	-	-	36-38°C	44-52 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	-	-	36-38°C	44-52 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	-	36-38°C	44-52 Hours
Listeria innocua	33090	>=10^3	Luxuriant	>=70%	Greenish-blue	Negative	36-38°C	44-52 Hours
Listeria grayi	19120	50-100	Luxuriant	>=70%	Greenish-blue	Negative	36-38°C	44-52 Hours
Listeria ivanovii	19119	50-100	Luxuriant	>=70%	Greenish-blue	Positive, opaque halo around the colony exhibiting phophatidylinositol specific phospholipase acivity	36-38°C	44-52 Hours
Listeria monocytogenes	19112	50-100	Luxuriant	>=70%	Greenish-blue	Positive, opaque halo around the colony exhibiting phophatidylinositol specific phospholipase acivity	36-38°C	44-52 Hours

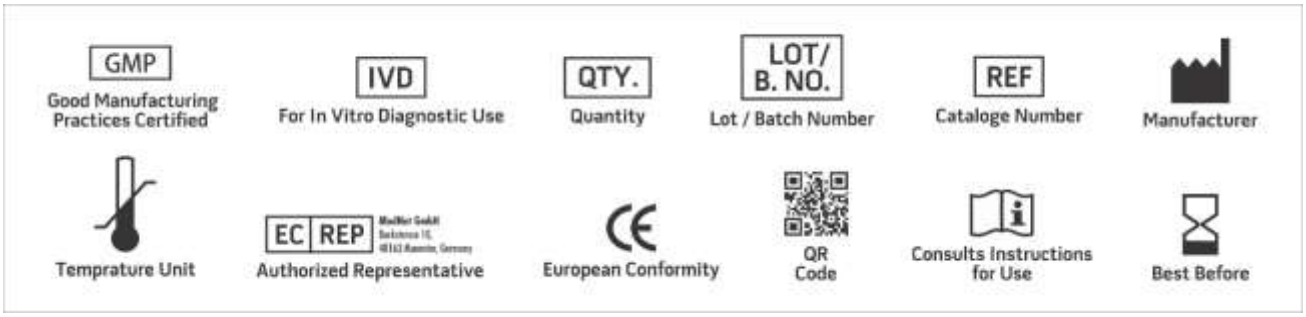
Listeria seeligeri	35967	50-100	Luxuriant	>=70%	Greenish-blue	Negative	36-38°C	44-52 Hours
Listeria welshimeri	43549	50-100	Luxuriant	>=70%	Greenish-blue	Negative	36-38°C	44-52 Hours
Pseudomonas aeruginosa	27853	>=10^3	Inhibited	0%	-	-	36-38°C	44-52 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Ottaviani F., Ottaviani M., and Agosti M. (1997 a), Industrie Alimentari 36, 1-3.
2. Ottaviani F., Ottaviani M., and Agosti M. (1997 b), Quimper Froid Symposium Proceedings p. 6, A.D.R.I.A. Quimper, France, 16-18 June 1997.
3. Draft Amendment ISO 11290-2:1996/DAM 1.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
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